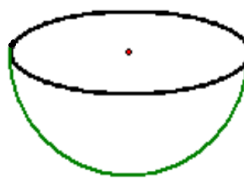
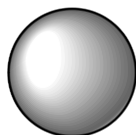
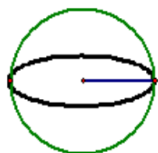


9-6 Area and Volume of Spheres

sphere -the set of all points in space that are the same distance from a point



Hemisphere

$$SA = 4 \pi r^2$$

Find the area and volume of a sphere with radius = 7cm.

$$V = \frac{4}{3} \pi r^3$$

$$\uparrow (x4 \div 3)$$

$$SA = 4 \pi 7^2$$

$$4 \pi 49$$

$$196 \pi \text{ cm}^2$$

$$\approx 615.8 \text{ cm}^2$$

$$SA = 4 \pi r^2$$

Find the volume of a sphere with radius = 9cm.

$$V = \frac{4}{3} \pi r^3$$

$$9^3$$

$$V = \frac{4}{3} \pi 9^3$$

$$\frac{4}{3} \pi 729$$

$$972 \pi \text{ cm}^3$$

$$\approx 3053.6 \text{ cm}^3$$

$$SA = 4 \pi r^2$$

Find the volume of a hemisphere
with radius = 10cm.

$$V = \frac{4}{3} \pi r^3$$

$\div 2$
Hemisphere

$$V = \frac{4}{3} \pi 10^3 \div 2$$

$$\frac{4}{3} \pi 1000$$

$$1333.\bar{3} \pi \div 2$$

$$V = 666.\bar{6} \pi$$

$$\approx 2094.4$$